What Can Be Found In Water In Nature?

All natural waters contain 'minerals' from the earth. Some minerals are beneficial, like calcium and some are detrimental, like lead. Generally, one can find a variety of naturally occurring minerals in all water, such as:

These mineral salts are the result of the natural erosion of soils and/or the decay of aquatic plants. The amounts of these minerals in water also determine the characteristics of the water, such as its hardness. Minerals in water give water its flavor. For example, mineral-rich water will often taste chalky or strong. Of the minerals shown above, and on the charts below, only barium and aluminum are regulated. Barium has a maximum contaminant level (MCL) and is a primary drinking water regulated mineral, while aluminum has a secondary maximum contaminant level (SMCL), which is a non-enforceable drinking water regulation*.

Average Values for 2001

Parameter	Treatment Plant	Raw Water Result	Finished Water Result	EPA Regulatory Limit
Aluminum*	Marston	0.18	0.08	0.05-0.2 ppm
Aluminum*	Foothills	0.08	0.04	0.05-0.2 ppm
Aluminum*	Moffat	0.06	None detected	0.05-0.2 ppm
Barium	Marston	0.05	0.04	2 ppm
Barium	Foothills	0.05	0.05	2 ppm
Barium	Moffat	0.02	0.02	2 ppm
Calcium	Marston	34.3	33.0	None
Calcium	Foothills	33.5	30.8	None
Calcium	Moffat	8.9	9.8	None

Average Values for 2001

Parameter	Treatment Plant	Raw Water Result	Finished Water Result	EPA Regulatory Limit (MCL)
Magnesium	Marston	8.1	7.9	None
Magnesium	Foothills	6.4	7.3	None
Magnesium	Moffat	2.1	1.8	None
Potassium	Marston	2.1	2.1	None
Potassium	Foothills	2.3	2.0	None
Potassium	Moffat	0.7	0.7	None
Sodium	Marston	16.5	20.0	None
Sodium	Foothills	12.2	18.0	None
Sodium	Moffat	2.4	6.8	None

Most minerals are not removed by conventional treatment. Calcium, magnesium, iron and manganese amounts may be reduced by our treatment, but not completely removed. Please note that the comparisons above, though from the same treatment plants are not always from samples collected on the same dates for the raw and finished waters, and therefore, are general comparisons. Drinking water naturally contains several minerals that are in fact beneficial to humans and other mammals. The minerals in both of the tables above, in addition to iron and manganese, are beneficial at certain levels. However, at levels above the Regulatory Limits, where applicable, some of these minerals may cause detrimental effects over a long period of time. If there is no regulatory limit, or MCL listed, then the amount of the mineral that might cause a potential health concern is much higher than would ever be found in fresh water. Therefore, it would be a waste of time and resources to regulate that constituent. The compounds on the following pages list other substances that are commonly found at minute levels in drinking water and in most bottled waters. Please note that breaks or missing data in the graphs below represent the months when the treatment plant was not in service.